

**Claims after this response:**

1. (Currently Amended) A method for creating a protocol dependent control path within an instrument system for instrument applications, to allow a first client to communicate with the instrument system, the method comprising a first protocol comprising:

causing the instrument system to identify the first client, obtaining  
~~identification of a client,~~ wherein the first client is configured to invoke ~~an~~ a  
first instrument application that is part of the instrument system and that  
controls an instrument that is part of the instrument system, the instrument  
making measurements of signals that are external to the instrument system,  
wherein the first client is configured to communicate with the instrument  
system using a first client specific protocol, and wherein the first instrument  
application is configured to communicate with clients using a first instrument  
application specific protocol;

causing the instrument system to identify the first instrument application with  
which the first client is configured to communicate ~~obtaining identification of~~  
~~the application;~~

causing the instrument system to identify ~~obtaining identification of the~~ first  
client specific protocol;

causing the instrument system to identify ~~obtaining identification of the~~ first  
instrument application specific protocol; and

causing the instrument system to automatically ~~creating~~ create a control path  
between the first client and the first instrument application, the control path  
communicating with the first client using the first client specific protocol and  
communicating with the first instrument application using the first application  
specific protocol.

2. (Currently Amended) the method as recited in claim 1, further comprising:

causing the instrument system to record ~~recording~~ the identification of the first client;

causing the instrument system to record ~~recording~~ the identification of the first instrument application;

causing the instrument system to record ~~recording~~ the identification of the first client specific protocol; and

causing the instrument system to record ~~recording~~ the identification of the first instrument application specific protocol.

3. (Currently Amended) The method as recited in claim 1, wherein first instrument application specific protocol differs from the first client specific protocol.

4. (Currently Amended) The method as recited in claim 1, further comprising:

repeating the first protocol ~~method steps of claim 1~~ for the first client and a second application, wherein the second application is configured to communicate using a second application specific protocol and wherein the second application specific protocol differs from first instrument application specific protocol.

5. (Currently Amended) The method as recited in claim 1, further comprising:

repeating the first protocol ~~method steps of claim 1~~ for a second client and the first instrument application, wherein the second client is configured to

communicate using a second client specific protocol and wherein the second client specific protocol differs from the first client specific protocol.

6. (Currently Amended) The method as recited in claim 1, further comprising:

repeating the first protocol method steps of claim 1 for a second client and a second application, wherein the second client is configured to communicate using a second client specific protocol, wherein the second application is configured to communicate using a second application specific protocol, and wherein the second client specific protocol differs from the first client specific protocol.

7. (Currently Amended) The method as recited in claim ~~4~~6, wherein the second application specific protocol differs from the application specific protocol.

8. (Currently Amended) A computer readable memory device embodying a computer program ~~of instructions executable by the computer~~, the program causing a computer within an instrument system to: instructions comprising:

~~obtaining~~cause the instrument system to obtain identification of a client, wherein the first client is configured to invoke an instrument application that controls an instrument that is part of the instrument system, the instrument making measurements of signals that are external to the instrument system, wherein the first client is configured to communicate with the instrument system using a client specific protocol, and wherein first instrument application communicates with clients using ~~an~~ application specific protocol;

~~obtaining identification of~~cause the instrument system to identify first instrument application;

~~obtaining identification of~~cause the instrument system to identify the first client specific protocol;

~~obtaining identification of~~ cause the instrument system to identify first  
instrument application specific protocol; and

automatically ~~creating~~ cause the instrument system to create a control path  
between the first client and first instrument application.

9. (Currently Amended) The computer readable memory as recited in claim 8, the  
instructions computer program further causing the computer to comprising:

~~recording~~ cause the instrument system to record the identification of the first  
client;

~~recording~~ cause the instrument system to record the identification of the first  
instrument application;

~~recording~~ cause the instrument system to record the identification of the first  
client specific protocol, and

~~recording~~ cause the instrument system to record the identification of the first  
instrument application specific protocol.

10. (Currently Amended) The computer readable memory as recited in claim 8,  
wherein the first instrument application specific protocol differs from the first client  
specific protocol.

11. (Currently Amended) ~~The computer readable memory as recited in claim 8, A~~  
computer readable memory device embodying a computer program of instructions  
comprising a first set of instructions causing a computer within an instrument system  
to:

cause the instrument system to identify a client, wherein the first client is  
configured to invoke an instrument application that controls an instrument that  
is part of the instrument system, the instrument making measurements of

signals that are external to the instrument system, wherein the first client is configured to communicate with the instrument system using a client specific protocol, and wherein the first instrument application communicates with clients using an application specific protocol;

cause the instrument system to identify the first instrument application;

cause the instrument system to identify the first client specific protocol;

cause the instrument system to identify the first instrument application specific protocol; and

automatically creating a control path between the first client and the first instrument application;

the instructions further comprising:

repeating the ~~method steps of claim 1~~ first set of instructions for the first client and a second application, wherein the second application is configured to communicate with clients using a second application specific protocol and wherein the second application specific protocol differs from the first instrument application specific protocol.

12. (Currently Amended) ~~The computer readable memory as recited in claim 8;~~ A computer readable memory device embodying a computer program of instructions comprising a first set of instructions causing a computer within an instrument system to:

cause the instrument system to identify a client, wherein the first client is configured to invoke an instrument application that controls an instrument that is part of the instrument system, the instrument making measurements of signals that are external to the instrument system, wherein the first client is

configured to communicate with the instrument system using a client specific protocol, and wherein the first instrument application communicates with clients using an application specific protocol;

cause the instrument system to identify the first instrument application;

cause the instrument system to identify the first client specific protocol;

cause the instrument system to identify the first instrument application specific protocol; and

automatically creating a control path between the first client and the first instrument application;

the instructions further comprising:

repeating the ~~method steps of claim 1~~ first set of instructions for a second client and the first instrument application, wherein the second client is configured to communicate with the instrument system using a second client specific protocol and wherein the second client specific protocol differs from the first client specific protocol.

13. (Currently Amended) ~~The computer readable memory as recited in claim 8, A~~ computer readable memory device embodying a computer program of instructions comprising a first set of instructions causing a computer within an instrument system to:

cause the instrument system to identify a client, wherein the first client is configured to invoke an instrument application that controls an instrument that is part of the instrument system, the instrument making measurements of signals that are external to the instrument system, wherein the first client is configured to communicate with the instrument system using a client specific

protocol, and wherein the first instrument application communicates with clients using an application specific protocol;

cause the instrument system to identify the first instrument application;

cause the instrument system to identify the first client specific protocol;

cause the instrument system to identify the first instrument application specific protocol; and

automatically creating a control path between the first client and the first instrument application;

the instructions further comprising:

repeating the ~~method steps of claim 1~~ first set of instructions for a second client and a second application, wherein the second client is configured to communicate with the instrument system using a second client specific protocol, wherein the second application is configured to communicate with clients using a second application specific protocol, and wherein the second client specific protocol differs from the first client specific protocol.

14. (Currently Amended) The computer readable memory as recited in claim 813, wherein the second application specific protocol differs from the first instrument application specific protocol.

15. (Currently Amended) A system comprising:

a management logic module configured to obtain identification of a client, to obtain identification of an instrument application, to obtain identification of the first client specific protocol, to obtain identification of the first instrument application specific protocol, and to automatically create a control path between the first client and the first instrument application, wherein the first

client is configured to invoke the first instrument application, wherein the first client is configured to communicate using a client specific protocol, wherein the first instrument application is configured to communicate using ~~a~~an application specific protocol, and wherein the first instrument application specific protocol differs from the first client specific protocol.

16. (Currently Amended) The system as recited in claim 15, wherein the control path comprises:

a communication logic module configured to receive communications from the first client which conform to the first client specific protocol, to translate such communications into communications to which the first instrument application is configured to understand and to which the first instrument application is configured to appropriately react, and to transfer the translated communications to the first instrument application.

17. (Currently Amended) The system as recited in claim 16, wherein the communication logic module comprises:

a server logic module configured to receive the communications from the first client; and

a translator logic module configured to receive the communications from the server logic module and to translate the received communications into communications to which the first instrument application is configured to understand and to which the first instrument application is configured to appropriately react, and to transfer the translated communications to the first instrument application.

18. (Currently Amended) The system as recited in claim 16, wherein the system further comprises:



~~the application,~~ wherein the first instrument application comprises a virtual instrument and an application component logic module and wherein the virtual instrument is configured to receive communications from the communication logic module and to perform any additional translation of the communications into communications to which the application component logic module is configured to understand and to which the application component logic module is configured to appropriately react, and to transfer such communications to the application component logic module.

19. (Original) The system as recited in claim 16, wherein the system further comprises:

an additional communication logic module configured to receive additional communications from an additional client which conform to an additional client specific protocol, to translate such additional communications into communications to which an additional application is configured to understand and to which the additional application is configured to appropriately react, and to transfer the translated additional communications to the additional application.

20. (Original) The system as recited in claim 16, wherein the system further comprises:

an additional communication logic module configured to receive additional communications from an additional client which conform to an additional client specific protocol, to translate such additional communications into communications to which the application is configured to understand and to which the application is configured to appropriately react, and to transfer the translated additional communications to the application.